

**Notice of Allowability**

Application No.

09/852,620

Applicant(s)

HORI ET AL.

Examiner

Gregory F. Cunningham

Art Unit

2676

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendments received 12/15/2005 and 2/6/2006.
2. ☒ The allowed claim(s) is/are 1-43.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08); Paper No./Mail Date \_\_\_\_\_
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Interview Summary (PTO-413); Paper No./Mail Date \_\_\_\_\_
- ☒ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other \_\_\_\_\_

### DETAILED ACTION

1. This action is responsive to amendment filed 12/15/2005 and 02/06/2006.
2. The disposition of the claims is as follows: claims 1-39 are pending in the application. Claims 1, 6, 11, 16, 20, 24 and 28-39 are independent claims. Claims 40-43 are newly added dependent claims.

### *Claim Rejections - 35 USC § 102 and 103*

3. In view of amended and review of cited references, 102 and 103 rejections are withdrawn.

### *Examiner's Amendment*

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
5. Authorization for this examiner's amendment was given in a telephone interview with Surinder Sachar (Registration Number on 34,423) on 2/27/2006.
  - A. Change claims 28, 29, 31, 32 and 33, second line, first word,  
From: usable  
To: readable
  - B. Change claim 30, first line,  
From: An article of manufacture comprising:

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To: An article of manufacture comprising a computer program stored on a computer readable medium comprising:

C. Change claims 34 – 39, first line,

From: A computer data signal embodied in a carrier wave,

To: A computer program stored on a computer readable medium for providing a computer data signal embodied in a carrier wave,

D. Change claims 34 – 38, third and fourth lines,

From: data including frames arranged in a frame advancing direction being overlapped, the computer data signal comprising:

To: data including frames arranged in a frame advancing direction being overlapped, the computer program comprising:

E. Change claim 39, fourth line,

From: direction being overlapped, the computer data signal comprising:

To: direction being overlapped, the computer program comprising:

*Allowable Subject Matter*

6. Claims 1-43 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Applicant's amended independent claims 1, 6, 11, 16, 20, 24 and 28-39 stands novel over the related prior art.

For instance, the related art of Lee (US 5,694,487) and Jung (US 5,731,851), provide for point-based motion estimation technique, a set of selected pixels, i.e., feature points, are

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determined at an encoder in a transmitting end and then reverse processed at a decoder in a receiving end and motion vectors for the feature points are transmitted to the receiver without their position data, wherein the feature points are defined as pixels of a previous frame or a current frame capable of representing motions of objects in a video signal so that motion vectors for all the pixels of the current frame can be recovered or approximated from those of the feature points in the receiver. In an encoder which adopts the motion estimation based on feature points, a number of feature points are first selected for all of the pixels contained in the previous frame. Then, motion vectors for the selected feature points are determined, wherein each of the motion vectors represents a spatial displacement between one feature point in the previous frame and a corresponding matching point, i.e., a most similar pixel, in the current frame. Specifically, the matching point for each of the feature points is searched in a search region within the current frame, wherein the search region is defined as a region of a predetermined area which encompasses the corresponding feature point. In the feature point-based motion estimation technique, since the current frame is predicted from the previous frame based on those motion vectors for a set of feature points, it is important to select the feature points capable of correctly representing the movement of the object.

Whereas each of the independent claims 1, 6, 11, 16, 20, 24 and 28-39 of the instant invention makes use of extracting the representative points of the figure for each of the frames, one of the representative points within one of the frames being a reference point represented by a coordinate value and remaining representative points within said one of the frames being represented by vectors with reference to the reference point or other of said remaining representative points.

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Therefore as claimed by the combined elements of amended independent claim 1, 6, 11, 16, 20, 24 and 28-39, the cited references and prior art of record lack separately and in combination the elements of amended claims. Claims (2-5, 40, 41), (7-10, 42, 43), 12-15, 17-19, 21-23 and 25-27 depend from allowable independent claims 1, 6, 11, 16, 20 and 24, respectively, and therefore are also allowed.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### *Responses*

9. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires to fax a response, (703) 872-9306 may be used for formal communications.

#### *Inquiries*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

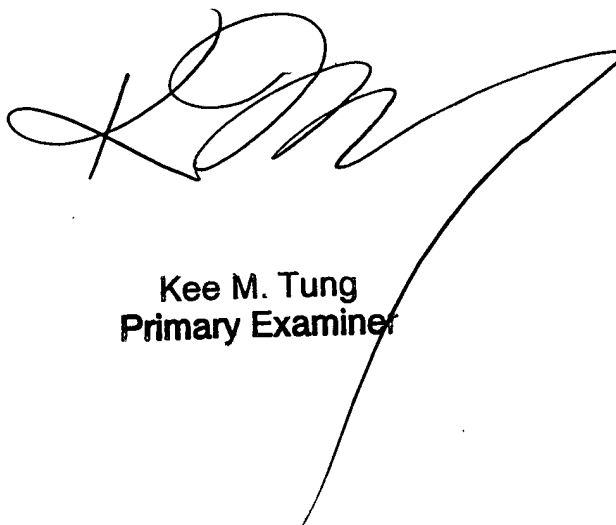
*Greg Cunningham 2/27/06*

Greg Cunningham

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02/27/2006

A large, stylized handwritten signature in black ink, likely belonging to Kee M. Tung, is written over the printed name and title.

**Kee M. Tung**  
**Primary Examiner**